ATTACHMENT 5

Lot -4117-_____

ODAB

FORMALDEHYDE NEUTRALIZATION

Albemarle Chemistry Fine Services

QUALITY POLICY

The consistent quality and timely delivery of
our products and services is absolutely imperative
to our success in the chemical manufacturing industry.
It is our goal to understand and to meet increasingly demanding customer requirements by:

- *Operating an up to date Quality Management System and complying with its requirements*
- *Continually improving the effectiveness of our Quality Management System through timely reviews and audits*
- *Establishing and reviewing quality objectives that are measurable by specific goals and targets*

Reviewed and Approved by the following:

Production _____ Date: _____

Engineering _____ Date: _____

Prepared By _____ Date: _____

Step 1

Do the following to the TG-2000-9

INITIALS

a. Check that it contains 1400-1600 gal **ODAB Formaldehyde Waste.** _____
b. Check that it is vented to the S-1 scrubber with **0.25 cfm NITROGEN** purge. _____
c. Check that bottom valve is closed. _____
d. Check that jacket cooling supply and return valves are open. _____

TIME _____
OPER _____
SUPV _____
DATE_____

Step 2

Activate the warning Beacon lights at doorways in B-1 when starting the circulation. Deactivate the warning Beacon lights at doorways in B-1 after circulation started and no incidents.

Circulate the **ODAB AQUEOUS WASTE** in the TG-2000-9 for 60 minutes. Sample 2 oz of the TG-2000-9 to the lab. Wear CPFII suit, air-hood, and Butyl gloves under neoprene gloves. Cover any spills with soda ash, then florco, sweep up and put in ODAB Spent Palladium Catalyst drum For Reclaim.

Label Sample: ODAB Lot 4117-_____
May Contain Formaldehyde, Potential Cancer Hazard
RG-2/9 Aqueous Formaldehyde Waste
Assay - % Formaldehyde
Priority – Urgent

_____% Formaldehyde

TIME _____
OPER _____
SUPV _____
DATE_____

STEP 3:

Calculate the **38% SODIUM BISULFITE SOLUTION** to add to the TG-2000-9 as follows:

TG-2/9 est. volume in gal _____ X _____% Formaldehyde Assay from Step 2= _____ gal Form
_____ gal Formaldehyde X 7.35 = _____ gal **38% SODIUM BISULFITE SOLUTION**
_____ gal **38% SODIUM BISULFITE SOLUTION** X 11.1 = _____ lb to add in Step 4.

FOREMAN MATH CHECK _____

TIME _____
OPER _____
SUPV _____
DATE_____

STEP 4:

Activate the warning Beacon lights at doorways in B-1 and caution tape off the TG-2000-9 sample area during sampling.

Circulate the **ODAB Aqueous waste** in the TG-2000-9. Charge with circulation below 50°C _____ **LBS. (from Step 3)** of **38% SODIUM BISULFITE SOLUTION.** from tote. Use the RG-500-4 for local ventilation. Close the vent valve after loading. Let circulate for 2 hours. Sample 2 oz. to the lab. If the % Formaldehyde is greater than 0.01% add **50 lb.** shots of **38% SODIUM BISULFITE SOLUTION to the TG-2000-9,** circulate the TG-2000-9 for 1 hour and resample to the lab. Wear CPF-II suit, Butyl gloves under neoprene gloves and air hood. Cover any spills with florco, sweep up and put in HAZARD SOLID WASTE. After % Formaldehyde is approved flush 5 gallons **WATER** through pump and line into TG-2000-9 and blow down with **NITROGEN**.

Operator Preload/Valve Check _____

GROSS	_____lbs	_____lbs	_____lbs	_____lbs
TARE	_____lbs	_____lbs	_____lbs	_____lbs
NET	_____lbs	_____lbs	_____lbs	_____lbs

TOTAL **_____lbs**

Operator wt. Check_____

Label Sample: ODAB LOT- 4117-_____
May Contain Formaldehyde, Potential Cancer Hazard
Part and Description – After Bisulfite add
Source TG-2000-9
Assay – % Formaldehyde,
Priority – Urgent

Final_____ Formaldehyde **Spec: Formaldehyde <0.01**
Final_____ pH

Return 38% SODIUM BISULFITE SOLUTION tote to B-5, freeze point 40°F.

TIME _____
OPER _____
SUPV _____
DATE_____

STEP 5: _____ Do this step if pH <6.0 in step 4 _____ Omit this step

Circulate the **ODAB Aqueous waste** in the TG-2000-9. Charge with circulation below 50°C **65 LBS.** (5 gal) of **50% CAUSTIC** into the TG-2000-9. Let circulate for 1 hour. Sample 2 oz. to the lab for pH. If the pH is <6.0 add **65 LBS.** (5 gal) shots of **50% CAUSTIC** to the TG-2000-9. Circulate the TG-2000-9 for 1 hour and resample to the lab. When pH is approved flush 5 gallons **WATER** through pump and line into TG-2000-9 and blow down with **NITROGEN**. Wear CPF-II suit, Butyl gloves under neoprene gloves and air hood. Cover any spills with florco, sweep up and put in HAZARD SOLID WASTE

Operator Preload/ Valve Check _____

GROSS	_____lbs	_____lbs	_____lbs	_____lbs
TARE	_____lbs	_____lbs	_____lbs	_____lbs
NET	_____lbs	_____lbs	_____lbs	_____lbs
PH	_____	_____	_____	_____

TOTAL _____lbs

Operator wt. Check_____

Label Sample: ODAB LOT- 4117-_____
May Contain Formaldehyde, Potential Cancer Hazard
Part and Description – After Caustic add
Source TG-2000-9
Assay – pH, Flash point
Priority – Urgent

Final_____ pH **Spec: >6.0-9.0**
Final_____ Flash point **Spec: >140°F**

TIME _____
OPER _____
SUPV _____
DATE_____

STEP 6

Stop the circulation of the TG-2000-9 and settle for 30 minutes.

Time

Settle starts_____
Settle ends_____

TIME _____
OPER _____
SUPV _____
DATE _____

STEP 7:

Pressure transfer the **BOTTOM ODAB AQUEOUS LAYER** in the TG-2000-9 using **10-PSI NITROGEN** to the correct waste tank. **Watch for split.** Bottom layer should be clear/colorless and top organic layer should be milk white to very slightly yellow Wear CPF-II suit, air-hood, and Butyl gloves under neoprene gloves. Cover any spills with florco, sweep up and put HAZARDOUS SOLID WASTE.
Blow down transfer line to tank with **NITROGEN**. Fill out bulk waste log.

PLANT OPERATOR VALVE CHECK _____

BOARD OPER VALVE CHECK _____

OPERATOR SPLIT CHECK _____

TCS-8000-____
Final level _____ GAL
Initial level _____ GAL
Amount _____ GAL

TIME _____
OPER _____
SUPV _____
DATE _____

STEP 8: _____ **Do Steps 8-11 IF 100 GAL ORG. LAYER IN TG-2000-9**
_____ **Omit This Step EST. GAL** _____

IF LAYER IS>100 GALLONS CONTACT COORDINATOR.

Load **150 gal WATER** to TG-2000-9. Circulate for 30 minutes.

H2O
_____ gal

TIME _____
OPER _____
SUPV _____
DATE _____

STEP 9: _____ **Do This Step**
_____ Omit This Step

Stop the circulation of the TG-2000-9 and settle for 1 hour.

Time

Settle starts_____
Settle ends_____

TIME _____
OPER _____
SUPV _____
DATE _____

STEP 10: _____ **Do This Step**
_____ Omit This Step

Pressure transfer the **BOTTOM ODAB AQUEOUS LAYER** in the TG-2000-9 using **10-PSI NITROGEN** to the correct waste tank. **Watch for split**. Bottom layer should be clear/colorless and top organic layer should be milk white to very slightly yellow. Wear CPF-II suit, air-hood, and Butyl gloves under neoprene gloves. Cover any spills with florco, sweep up and put HAZARDOUS SOLID WASTE.
Blow down transfer line to tank with **NITROGEN**. Fill out bulk waste log.

PLANT OPERATOR VALVE CHECK _____

BOARD OPER VALVE CHECK _____

OPERATOR SPLIT CHECK _____

TCS-8000-____
Final level _____ GAL
Initial level _____ GAL
Amount _____ GAL

TIME _____
OPER _____
SUPV _____
DATE _____

STEP 11: _____ **Do This Step** _____ **Omit This Step**

Sample 2 oz of the **WASHED ODAB ORGANIC LAYER** in the TG-2000-9. Wear CPFII suit, air-hood, and Butyl gloves under neoprene gloves. Cover any spills with soda ash, then florco, sweep up and put HAZARDOUS SOLID WASTE.

Label Sample: ODAB Lot 4117-_____
May Contain Formaldehyde, Potential Cancer Hazard
RG-2/9 Washed ODAB Organic Layer
Assay - % ODAB
Priority – Urgent

After sampling, do not wait for results, and DRUM UP into used ODAB 55 gallon drums the **WASHED ODAB ORGANIC LAYER** in the TG-2000-9. Wear CPF-II suit, air-hood, and Butyl gloves under neoprene gloves. Cover any spills with florco, sweep up and put in HAZARDOUS SOLID WASTE.

Label Drum: ODAB Lot 4117-_____
May Contain Formaldehyde, Potential Cancer Hazard
TG-2/9 Washed ODAB Organic Layer
Save For Reuse
Date

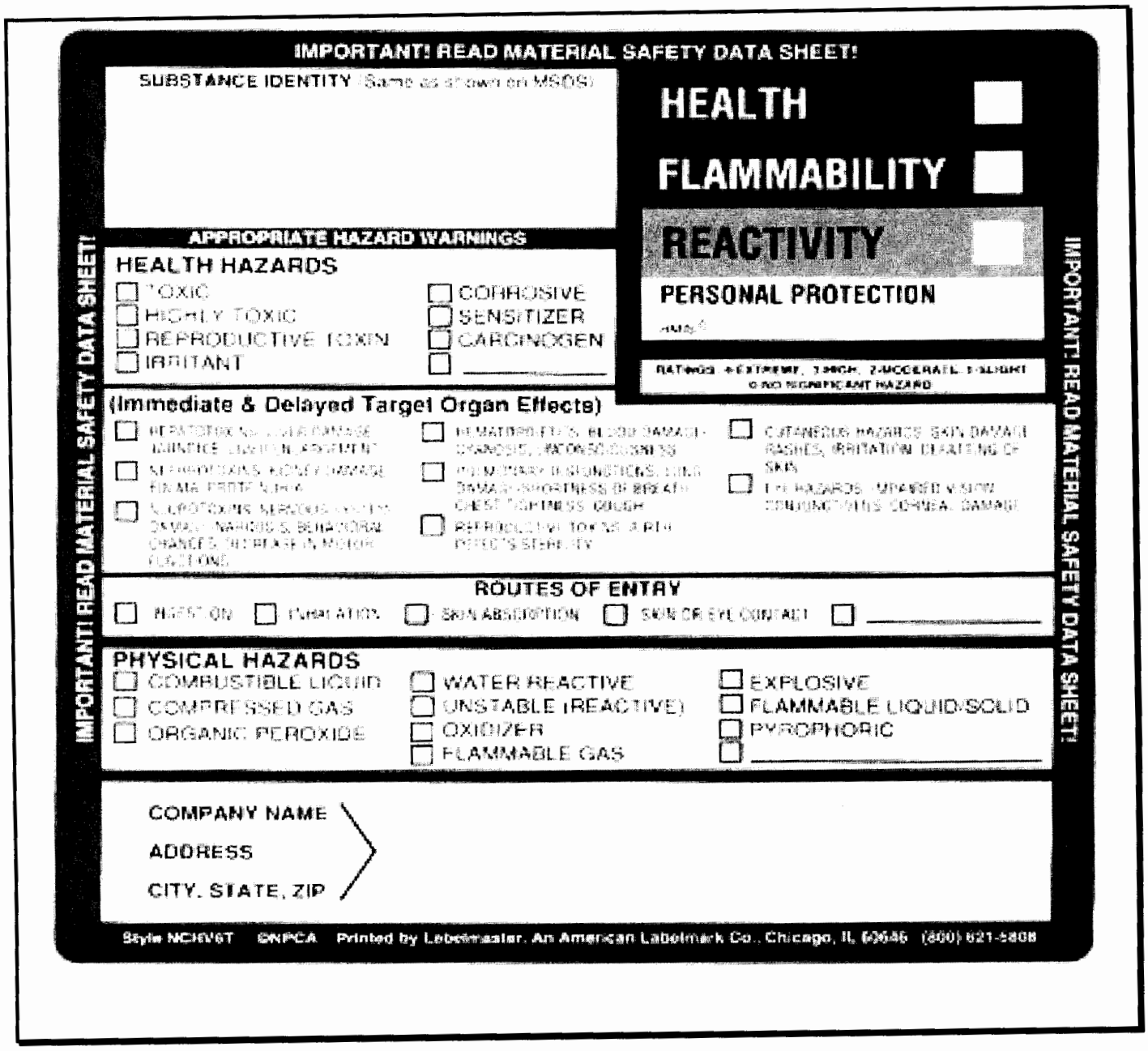
Drum #	1	2	3	4	5	6	
GROSS	_____	_____	_____	_____	_____	_____	lbs
TARE	_____	_____	_____	_____	_____	_____	lbs
NET	_____	_____	_____	_____	_____	_____	lbs

Total _____ lbs

. Place an HMIS label on each drum as on next page.

TIME _____
OPER _____
SUPV _____
DATE _____

ODAB HMIS label



STEP 12:

Circulate the **ODAB AQUEOUS WASTE** in the RG-500-4 for 60 minutes. Sample 2 oz of the RG-500-4 to the lab. Wear CPFII suit, air-hood, and Butyl gloves under neoprene gloves. Cover any spills with soda ash, then florco, sweep up and put in ODAB Spent Palladium Catalyst drum For Reclaim.

Label Sample: ODAB Lot 4117-_____
May Contain Formaldehyde, Potential Cancer Hazard
RG-500-4 Aqueous Formaldehyde Waste
Assay - % Formaldehyde
Priority – Urgent

_____% Formaldehyde

TIME _____
OPER _____
SUPV _____
DATE _____

STEP 13: _____ Do this step if % Formaldehyde >0.01% in step 12
_____ Omit this step

Calculate the **38% SODIUM BISULFITE SOLUTION** to add to the RG-500-4 as follows:

RG-500-4 est. volume in gal _____ X _____% Formaldehyde Assay from Step 12 = _____ gal Form_____ gal Formaldehyde X 7.35 = _____ gal **38% SODIUM BISULFITE SOLUTION** _____ gal **38% SODIUM BISULFITE SOLUTION** X 11.1 = _____ lb to add in Step 14.

FOREMAN MATH CHECK _____

TIME _____
OPER _____
SUPV _____
DATE _____

STEP 14: _____ Do this step if % Formaldehyde >0.01% in step 12
_____ Omit this step

Activate the warning Beacon lights at doorways in B-1 and caution tape off the TG-2000-9 sample area during sampling.

Circulate the **ODAB Aqueous waste** in the RG-500-4. Charge with circulation below 50°C _____ **LBS. (from Step 13)** of **38% SODIUM BISULFITE SOLUTION.** from tote. Let circulate for 2 hours. Sample 2 oz. to the lab. If the % Formaldehyde is greater than 0.01% add **50 lb.** shots of **38% SODIUM BISULFITE SOLUTION to the** RG-500-4, circulate the RG-500-4 for 1 hour and resample to the lab. Wear CPF-II suit, Butyl gloves under neoprene gloves and air hood. Cover any spills with florco, sweep up and put in HAZARD SOLID WASTE. After % Formaldehyde is approved flush 5 gallons **WATER** through pump and line into RG-500-4 and blow down with **NITROGEN**.

Operator Preload/Valve Check _____

GROSS	_____lbs	_____lbs	_____lbs	_____lbs
TARE	_____lbs	_____lbs	_____lbs	_____lbs
NET	_____lbs	_____lbs	_____lbs	_____lbs

TOTAL _____lbs

Operator wt. Check_____

Label Sample: ODAB **LOT- 4117-_____**
May Contain Formaldehyde, Potential Cancer Hazard
Part and Description – After Bisulfite add
Source RG-500-4
Assay – % Formaldehyde,
Priority – Urgent

Final_____ Formaldehyde **Spec: Formaldehyde <0.01**
Final_____ pH
Return 38% SODIUM BISULFITE SOLUTION tote to B-5, freeze point 40°F.

TIME _____
OPER _____
SUPV _____
DATE _____

STEP 15: _____ Do this step if pH <6.0 in step 14
_____ Omit this step

Circulate the **ODAB Aqueous waste** in the RG-500-4. Charge with circulation below 50°C **65 LBS.** (5 gal) of **50% CAUSTIC** to the RG-500-4. Let circulate for 1 hour. Sample 2 oz. to the lab for pH. If the pH is <6.0 add **65 LBS.** (5 gal) shots of **50% CAUSTIC** to the RG-500-4. Circulate the RG-500-4 for 1 hour and resample to the lab. When pH is approved flush 5 gallons **WATER** through pump and line into RG-500-4 and blow down with **NITROGEN**. Wear CPF-II suit, Butyl gloves under neoprene gloves and air hood. Cover any spills with florco, sweep up and put in HAZARD SOLID WASTE

Operator Preload/Valve Check _____

GROSS	_____lbs	_____lbs	_____lbs	_____lbs
TARE	_____lbs	_____lbs	_____lbs	_____lbs
NET	_____lbs	_____lbs	_____lbs	_____lbs
PH	_____	_____	_____	_____

TOTAL _____lbs

Operator wt. Check_____

Label Sample: ODAB LOT- 4117-_____
May Contain Formaldehyde, Potential Cancer Hazard
Part and Description – After Caustic add
Source RG-500-4
Assay – pH, Flash point
Priority – Urgent

Final_____ pH **Spec: >6.0-9.0**
Final_____ Flash point **Spec: >140°F**

TIME _____
OPER _____
SUPV _____
DATE _____

STEP 16

When RG-500-4 pH is 6.0-9.0 transfer the RG-500-4 to the correct waste tank. Flush RG-500-4 to waste tank with 30 gallons water. Wear face shield, Tyvek suit and gloves while transferring. Cover any spills with florco, sweep up and put in solid waste. **BLOW DOWN LINE WITH NITROGEN WHEN TRANSFER IS COMPLETE.** Fill out waste log.

OPERATOR TANK/VALVE CHECK _____

RG-500-4 Level		**BST-8000-_____ Level**	
Initial	_____ Gal	Final	_____ Gal
Final	_____ Gal	Initial	_____ Gal
Amount	_____ Gal	Amount	_____ Gal

TIME _____
OPER _____
SUPV _____
DATE _____

STEP 17

Charge **<u>50</u> gallons** of **city water** to the RG-500-4.

WATER CHARGE

Final Reading	_____ Gallons
Initial Reading	_____ Gallons
Total	_____ Gallons

TIME _____
OPER _____
SUPV _____
DATE _____

STEP 18

Start RG-500-4 circulation pump then start the RG-500-4 blower motor.

TIME _____
OPER _____
SUPV _____
DATE _____

STEP 19

Charge with circulation **100 LBS** of **38% SODIUM BISULFITE SOLUTION.** from totes. Continue to circulate. Wear CPF-II suit, Butyl gloves under neoprene gloves and air hood. Cover any spills with florco, sweep up and put in HAZARD SOLID WASTE. Flush 5 gallons **WATER** through pump and line into RG-500-4 and blow down with **NITROGEN**.

Operator Valve/Preload Check _____

GROSS _____lbs
TARE _____lbs
NET _____lbs

TOTAL _____lbs

Operator Weight Check _____

TIME _____
OPER _____
SUPV _____
DATE _____

STEP 20:

Return procedure to supervisor.

TIME _____
OPER _____
SUPV _____
DATE _____

RAW MATERIAL USAGE REPORT
ODAB
FORMALDEHYDE
NEUTRALIZATION

PRODUCT NAME:	**ODAB**	**PRODUCT CODE #**	**4117**
PRODUCT LOT #:	**4117-**	**START DATE:**	
PRODUCT YIELD:		**COMPLETION DATE:**	

Item #	Description	Standard Qty (lbs)	Actual Qty (lbs)	Lot number	COMMENTS
102165	38% SODIUM BISULFITE SOLUTION				
100965	50% CAUSTIC				

ATTACHMENT 6

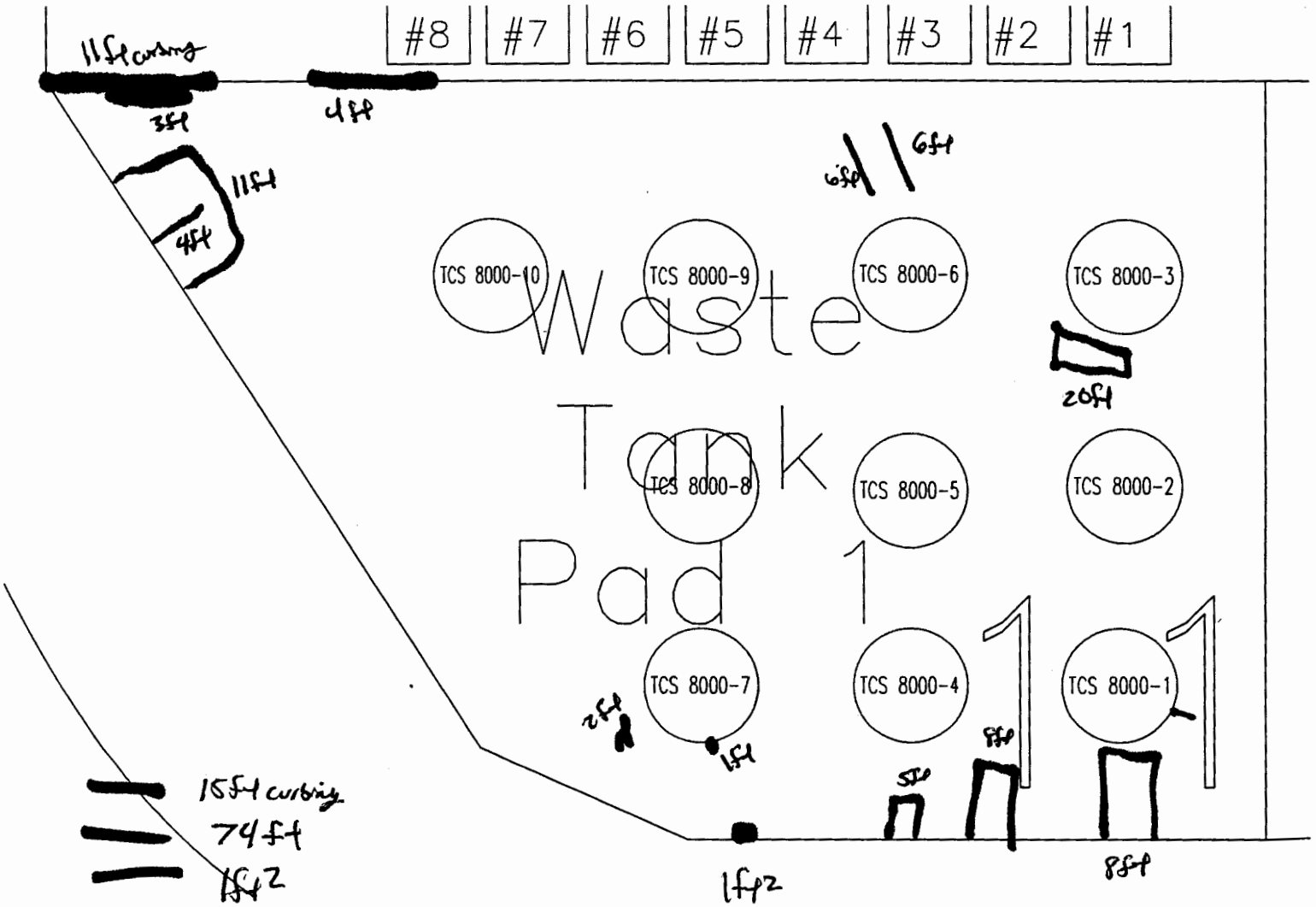
HAZARDOUS WASTE TANKS LIST

REVISED 03/30/06

TANK DESIGNATION	CURRENT USE	INSTALLATION DATE	Pa DEP PERMIT	FIRE PERMIT	PE/ CERT	NEXT INSPECTION
TCS-8,000-1	AQUEOUS/ MPPE	05-02	NO	YES	YES 05-02	05-2012
TCS-8,000-2	AQUEOUS/ FLAMMABLE	08-01	NO	YES	YES 08-01	08-2011
TCS-8,000-3	AQUEOUS/ FLAMMABLE	08-02	NO	YES	YES 08-02	08-2012
TCS-8,000-4	AQUEOUS/ MPPE	05-02	NO	YES	YES 05-02	05-2012
TCS-8,000-5	AQUEOUS/ FLAMMABLE	07-02	NO	YES	YES 07-02	06-2012
TCS-8,000-6	AQUEOUS/ FLAMMABLE	06-02	NO	YES	YES 06-02	06-2012
TCS-8,000-7	ORGANIC/ FLAMMABLE	10-02	NO	YES	YES 10-02	10-2012
TCS-8,000-8	AQUEOUS/ ORGANIC/ FLAMMABLE	08-01	NO	YES	YES 02-06	02-2011
TCS-8,000-9	AQUEOUS/ FLAMMABLE	08-02	NO	YES	YES 08-02	08-2012
TCS-8,000-10	ORGANIC FLAMMABLE	07-95	NO	YES	YES 02-06	02-2011

FILENAME: S:/DEPT/ENVIRON/WORD/HAZARDOUS WASTE TANK LIST

ATTACHMENT 7


#8
#7
#6
#5
#4
#3
#2
#1
11ft curbing
3ft
4ft
11ft
4ft
6ft
6ft
TCS 8000-10
TCS 8000-9
TCS 8000-6
TCS 8000-3
Waste
Tank
Pad 1
20ft
TCS 8000-8
TCS 8000-5
TCS 8000-2
TCS 8000-7
TCS 8000-4
TCS 8000-1
2ft
1ft
5ft
8ft
8ft
15ft curbing
74ft
1ft2
1ft2

ATTACHMENT 8

ADSORBATE PROFILE DOCUMENT

CALGON CARBON CORPORATION

Fill in the required areas of the form and ship to the address at right along with the **Carbon Acceptance Canister** or **Sample Bottle** containing the spent carbon. If carbon returns will be RCRA manifested, also include the *Certification of Generator Form* and the *Chain of Custody Document.*	Ship completed paperwork and spent carbon sample to: **Calgon Carbon Corporation** **Attention: Reactivation Acceptance Dept.** **500 Calgon Carbon Drive** **Pittsburgh, PA 15205** **e-mail: carbonacceptance@calgoncarbon.com**

Section 1 – Generator Information **Date Completed:** 11/14/03

Company Name	ALBEMARLE CORPORATION	Facility Name	TYRONE
Mailing Address	2 ADAMS AVENUE	Shipping address	SAME
	TYRONE INDUSTRIAL PARK		
	TYRONE PA 16686-0216		
Technical Contact	JAMES BURKEY	Title	ENVIRONMENTAL ENGINEER
Telephone #	814-684-7209	Fax #	814-684-7532

Note that it is the responsibility of the generator/customer to characterize the spent carbon, including determination and declaration of RCRA status, disclosure of contaminants present in the stream being treated, etc. If you have specific questions on these subjects or if you need help completing this document call 1-800-422-7266 and ask for the Carbon Acceptance Department or refer to our web site at www.calgoncarbon.com/serviceplatform/carbon_return_procedures.htm

Section 2 – Billing Information

The fee for carbon acceptance testing is $400 (USD) for non-hazardous projects and $1000 (USD) for RCRA-hazardous projects, plus tax where applicable. Please provide the following billing information. This information is required in order for carbon acceptance testing to begin.

Calgon Carbon Technical Sales Representative	ROBERT RUCKEL
Purchase Order # for Carbon Acceptance Testing	9500524068

Bill to Name	SAME AS ABOVE		
Address			
Attention	PATTI MILLS	Telephone #	814-684-7201

Section 3 – Notice to RCRA Spent Carbon Generators

As a requirement of 40 CRF 264.12(b), Calgon Carbon Corporation is required to notify hazardous waste generators that its facilities have the proper permits in place to accept hazardous spent carbon. The facilities covered under this notification are:

Facility	**EPA ID Number**
Catlettsburg, KY	KYD005009923
Neville Island, PA	PAD000736942

ADSORBATE PROFILE DOCUMENT

Generator Name ALBEMARLE CORPORATION	Date 11/14/03

Section 4 – Regulatory Profile

Is the spent carbon generated at a SUPERFUND Site ?	YES (X) NO
Has TCLP testing been performed on the spent carbon sample ? If "YES", **Attach Lab Report**	YES (X) NO
Is the spent carbon a RCRA hazardous waste as defined by 40CFR Part 261 ?	YES (X) NO
If "YES", list EPA waste code number(s):	
If "YES", list Facility EPA ID#:	
Is the spent carbon a hazardous waste in the facility's state or province ?	YES (X) NO
If "YES", list state or provincial waste code number (s):	
If "YES", list Facility State ID#:	
Is the carbon treating a stream which is subject to the Benzene NESHAP Standard (40CFR Part 61) ?	YES (X) NO
Is the carbon treating a stream which is subject to the Hazardous Organic NESHAP Standard (40 CFR Part 63) ?	(X)YES (X) NO
Does the spent carbon contain substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372 ?	(X)YES NO
If "YES", list substances: TOLUENE, METHYLENE CHLORIDE, TETRACHLOROETHYLENE	
Does the spent carbon contain any of the following chemicals ?	
1. Polychlorinated Biphenyls (PCBs) ? If "NO" proceed to **Question** 2. If "YES", complete below.	YES (X)NO
Total PCBs on the spent carbon must be below 50 mg/kg to be accepted for reactivation. You must report and certify the actual concentration as determined by a test of a representative composite sample of the spent activated carbon from the adsorber. Calgon Carbon Corporation can arrange to have this testing done for you at an additional cost. Contact your Technical Service Representative for additional information.	**Total PCBs** _____ **mg/kg** **(Attach Lab Report)**
2. Dioxins	YES (X)NO
3. 1,2-Dibromo-3-chloropropane (DBCP)	YES (X)NO
Is the spent carbon known to have radioactive characteristics? If yes, please explain.	YES (X)NO
Does the spent carbon have the potential to possess radioactive characteristics based on radioactivity in the treated application? If yes, please explain.	YES (X)NO
Does the carbon treat an aqueous stream or a vapor stream from an aqueous source ?	(X)YES NO

Check the appropriate DOT shipping name for the spent carbon.

- (X) Not Regulated
- □ Scrap Carbon
- □ Hazardous Waste, Solid, N.O.S., 9, NA 3077, III, (list waste codes) _____
- □ RQ, Hazardous Waste, Solid, N.O.S., 9, NA 3077, III, (list waste codes) _____
- □ Other (if other, give description) _____

ADSORBATE PROFILE DOCUMENT

Generator Name ALBEMARLE CORPORATION	Date 11/14/03

Section 5 – Carbon Identification and Return Information

				Circle One
Carbon Type				X Granular / Pellet / Liquid / Vapor
U.S. Mesh Size				X
Carbon Product Name				
Calgon Carbon Product ?				X Yes / No
If "NO", indicate type	Coal Base	Coconut Base	Other	
Is spent carbon free-flowing ?				X Yes / No
Does spent carbon contain silt, sand, gravel or other foreign material ?				Yes / X No
If "YES", describe				
Adsorption Equipment by:	X Calgon Carbon	Customer	Other	
Pounds of spent carbon per return	1,000			
Frequency of spent carbon returns	2 Times per Week, Month, Year or			One Time Only
Spent Carbon return via:	Bulk Truck	1800 lb. Vapor Pac–Plastic	2000 lb. Cyclesorb–FRP	
Circle One	Calgon Bins	1800 lb. Vapor Pac–SS	2000 lb. Cyclesorb-SS	
	Super Sack per Jim Burkey 11/24/03	Vapor Pac 10	1000 lb. Cyclesorb-FRP	
	55 Gal. Drum	Ventsorb	Flowsorb	
	Other			

Section 6 – Stream Profile

Type of Stream √ Check all that Apply		Stream Components
Liquid Phase Treatment	**Vapor Phase Treatment**	**List the principal components and their concentration in the stream (ppm, mg/L, wt%, etc.)**
☐ Spill Clean-up	☐ Air Stripper	
☒ Industrial Process	☐ Industrial Process Vapor	
☐ Food-Grade Process	☐ Food-Grade Process	
☐ Potable Water – Surface	☐ Solvent Recovery	
☐ Potable Water – GW	☒ Tank Vent	
☐ Other – Describe below	☐ Other – Describe below	

Component	Amount	Unit
TOLUENE	< 100	PPM
METHYLENE CHLORIDE	< 100	PPM
TETRACHLOROETHYLENE	< 100	PPM
XYLENE	< 100	PPM
METHACRYLALDEHYDE	< 100	PPM JRB
ACETIC ACID	< 100	PPM JRB
BUTYL ACETATE	< 100	PPM JRB

Describe the stream and how it is generated.

VENT CONTROL FOR MPPE WATER TREATMENT UNIT

What is the stream flow rate?	____ gpm or 0.25 cfm	
Is the stream treated at elevated temperature?	YES (NO)	If "YES", Temperature ___ ° F or C
Is the stream saturated with inorganic salts ?	YES (NO)	

Section 7 – Environmental Audit of Facilities

Will it be necessary for you to perform an environmental audit of our reactivation facilities prior to the return of spent carbon ?	YES (NO)

ADSORBATE PROFILE DOCUMENT

Generator Name ALBEMARLE CORPORATION	Date 11/14/03

Section 8 – Safety Profile (Attach any analyses, toxilogical studies, safety data, MSDS, etc. that are relevant)

Are any of the following types of compounds, materials or conditions present in the spent carbon ? If "YES", describe or identify condition in the column to the right.

	Circle One		
OSHA regulated Carcinogens (per 29 CFR 1910)	(YES)	NO	METHYLENE CHLORIDE TETRACHLOROETHYLENE
Halogenated Organics	(YES)	NO	METHYLENE CHLORIDE TETRACHLOROETHYLENE
Sulfur-Containing Organics	YES	(NO)	
Pesticides/Herbicides	YES	(NO)	
Highly Toxic Organics	YES	(NO)	
Explosive (Self-Igniting or Shock Sensitive Material)	YES	(NO)	
Biological or Disease-Causing Agents	YES	(NO)	
Reactive Cyanide or Sulfide	YES	(NO)	
Odorous Compounds	YES	(NO)	
Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Cu, Mn, Ni, Zn)	YES	(NO)	

Are there any unique safe handling requirements necessary for processing the spent carbon? If "YES", describe	YES (NO)

If the spent carbon contains proprietary chemicals, list any acute or chronic hazards associated with or alleged to be associated with human contact or exposure to the material.

Section 9 – Certification

To the best of my knowledge and information, the spent activated carbon to be returned to Calgon Carbon Corporation for reactivation does not contain PCBs greater than 50 ppm; dioxins above 20 ppb TCDD International Toxicity Equivalents; 1,2-dibromo-3-chloropropane greater than 1.5% by weight; nor is it a characteristically ignitable (for return to Neville Island Plant only), corrosive or reactive waste. I certify that this information is complete, accurate and true.

Name JAMES BURKEY

Signature James Burkey

Title ENVIRONMENTAL ENGINEER

Date 11/14/03

Section 10 – Confidentiality

Carbon Corporation, as a consideration of the customer's release of the above information and any Calgon subsequent data provided, agrees to treat such information as confidential property and will not disclose such information to others except as required by law and facility operating permits.

Name Lori Keller

Signature Lori Keller

Title Technical Services Specialist

Date 11-21-03

CALGON CARBON CORPORATION

Reactivation Acceptance Testing

TSR Number: 20031145
Customer: Albemarle Corporation
City, State: Tyrone, PA

Applications Engineer:
Sales Person: Robert W. Ruckel

Container: Plastic Bottle - 5 gal.

Platform:

Sent to Testing: 11/21/2003
Completed: 11/21/2003

Total Samples: 1

Tests	Test Method	Results			Units	Analyst
Sample Numbers:		**CA - 3383 - 1**				
Contact pH	TM-62	9.1	-	-	-	Kotyk
Dean-Stark Moisture	TM-49	20.0	-	-	%	Kotyk
Ignitability	RTM-10	No	-	-	-	Kotyk
Loading Calculation	Calculation	16	-	-	%	Kotyk
Nature of Spent Carbon	Physical Description	Dry,Pellet,Odor	-	-	-	Kotyk
Pellet Apparent Density, as rec'd	TM-56	0.727	-	-	g/cc	Kotyk
Total Bromide	RTM-8	BDL	-	-	%	Kotyk
Total Chloride	RTM-8	1.2	-	-	%	Kotyk
Total Fluoride	RTM-8	BDL	-	-	%	Kotyk
Total Sulfur	TM-30	0.4	-	-	%	Kotyk

Particle Size Distribution:

Samples:

CA - 3383 - 1 Spent

Comments:

Calgon Carbon Corporation
Technical Service Request

CCC Rep: Robert W. Ruckel
Business Unit: Central
Location: Pittsburgh, PA
Created By: Rene Kotyk

Date Created: 11/21/2003
Received: ○ TSR ○ Sample ● Both **Status:** Open

Confidential Readers:
Questionnaire: ○ Yes ● No

TSR#: 20031145
Date TSR# Assigned: 11/21/2003
Sales Manager: Lisa S. Reese

Tech Group: Carbon Acceptance (Click here to change Tech Group)
Tech Service Supervisor: Patricia A. Reiser

Application/Process Engineer:
Platform:

Chargeable: ☐ Yes **If "Yes", Amount:**

Estimated Cost, $:
Estimated Manpower, mandays:
P.O.#: **P.O. Amount:**
Copy List for Report:

Customer: Albemarle Corporation
Carbon Acceptance No.: ○ N ○ R ○ S

Contact: James Burkey
Address: 2 Adams Ave. Tyrone Industrial Park
City: Tyrone **State:** PA **ZIP:** 16686-0216
Phone: 814-684-7209 **Fax:** 814-684-7532
Email:

Site Information
Facility Name: Albemarle Corporation
Facility Address: 2 Adams Ave. Tyrone Industrial Park
City: Tyrone **State:** PA **Zip:** 16686-0216

Third Party Information
Bill To: Albemarle Corporation
Address: 2 Adams Ave. Tyrone Industrial Park
City: Tyrone **State:** PA **Zip:** 16686-0216
Contact
First Name: Patti
Middle Initial:
Last Name: Mills
Telephone: 814-684-7201

Sold To
Customer Number:
Contract Number:
Ship To
Customer Number:
Contract Number:
Bill To
Customer Number:
Contract Number: 9500524068

TSR Log

Sales *(Information required for project prioritization)*
Carbon: 2,000 LB/Year
Carbon Type:

Requested Completion Date:
Date Sample Sent:

Project Classifications: CEN - Central Region
Market Area: Environmental Air
Application: VOC Industrial
Products: Service

Date Materials Received:

TSR Approver: Patricia A. Reiser
Approved: Patricia A. Reiser **Date Approved:** 11/21/2003

Problems/Description:

Safety Precautions:

Recommended Work

Routine Analysis	Instrumental Analysis	Other	Separations Testing
Carbon Acceptance			

Carbon Acceptance - Other

RCRA Status: Non-Hazardous
Treatment System:
Return Mode:
CA Testing: Quick
Outside Testing:

Comments:

Sample Log

Detail

Total Samples: 1
Analyst: Kotyk
Batch Number: CA - 3383
Sample Numbers: CA - 3383 - 1 **Description:** Spent
Type: Carbon
Container: Plastic Bottle - 5 gal.
Comments:
APD Received: (●) Yes ( ) No
APD Complete: (●) Yes ( ) No
Priority: Rush
Sample Received: 11/20/2003
Project Sent to Testing: 11/21/2003
Project Due Date: 11/28/2003
Est. Completion Date:
Data Received:
Project Completed:
Date Released: